

# 8CM015.12-0

## 1 General information

- Can be used in cable drag chains
- Assembled specifically for use with ACOPOS 1010/1016/1022/1045/1090 servo drives and B&R servo motor with motor connector size 1

## 2 Order data

| Model number | Short description                                                                                                                                                  | Figure                                                                              |
|--------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|
|              | <b>0.75 mm<sup>2</sup> motor cables</b>                                                                                                                            |                                                                                     |
| 8CM015.12-0  | Motor cable, length 15 m, 4x 0.75 mm <sup>2</sup> + 2x 2x 0.34 mm <sup>2</sup> , 8-pin female Intercontec motor connector size 1, can be used in cable drag chains |  |

Table 1: 8CM015.12-0 - Order data

## 3 Technical data

| Model number                               | 8CM015.12-0                                                                                                                     |
|--------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------|
| <b>General information</b>                 |                                                                                                                                 |
| Cable cross section                        | 4x 0.75 mm <sup>2</sup> + 2x 2x 0.34 mm <sup>2</sup>                                                                            |
| Durability                                 | Oil resistance per HD 22.10 appendix A, DIN EN 60811-404 <sup>1)</sup>                                                          |
| Certification                              | E170315 cRUus AWM STYLE 21223 AWM I/II A/B 80°C 1000 V FT1 <sup>1)</sup>                                                        |
| Certifications                             |                                                                                                                                 |
| CE                                         | Yes                                                                                                                             |
| UL                                         | cULus E225616                                                                                                                   |
| EAC                                        | Power conversion equipment                                                                                                      |
|                                            | Yes                                                                                                                             |
| <b>Cable construction</b>                  |                                                                                                                                 |
| Power lines                                |                                                                                                                                 |
| Quantity                                   | 4                                                                                                                               |
| Wire insulation                            | PP                                                                                                                              |
| Wire colors                                | Black, brown, blue, yellow/green                                                                                                |
| Variant                                    | Tinned copper stranded wire                                                                                                     |
| Cross section                              | 0.75 mm <sup>2</sup>                                                                                                            |
| Shield                                     | No                                                                                                                              |
| Stranding                                  | No                                                                                                                              |
| Signal line                                |                                                                                                                                 |
| Quantity                                   | 4                                                                                                                               |
| Wire insulation                            | PP                                                                                                                              |
| Wire colors                                | White, white/red, white/blue, white/green                                                                                       |
| Variant                                    | Tinned copper stranded wire                                                                                                     |
| Cross section                              | 0.34 mm <sup>2</sup>                                                                                                            |
| Shield                                     | Individually shielded in pairs, tinned copper braiding, optical coverage > 85% and foil shield                                  |
| Stranding                                  | White with white/red and white/blue with white/green                                                                            |
| Cable stranding                            | With filler elements and foil shield                                                                                            |
| Cable shield                               | Tinned copper braiding, optical coverage > 85% and foil shield                                                                  |
| Outer jacket                               |                                                                                                                                 |
| Material                                   | TPU                                                                                                                             |
| Color                                      | Orange, similar to RAL 2003 flat                                                                                                |
| Labeling                                   | B&R 4 G 0.75 + 2 x (2x0.34)C C E170315 cRUus AWM STYLE 21223 AWM I/II A/B 80°C 1000 V FT1 production order number <sup>1)</sup> |
| <b>Connector</b>                           |                                                                                                                                 |
| Type                                       | 8-pin female speedtec motor connector, size 1.0                                                                                 |
| Mating cycles                              | <500                                                                                                                            |
| Contacts                                   | 8 (4 power and 4 signal contacts)                                                                                               |
| Degree of protection per EN 60529          | IP66/67 when connected                                                                                                          |
| <b>Electrical properties <sup>1)</sup></b> |                                                                                                                                 |
| Operating voltage                          | Max. 1000 V AC (UL)                                                                                                             |
| Test voltage                               |                                                                                                                                 |
| Wire - Wire                                | 4 kV                                                                                                                            |
| Wire - Shield                              | 4 kV                                                                                                                            |

Table 2: 8CM015.12-0 - Technical data

| Model number                                                | 8CM015.12-0                                                         |
|-------------------------------------------------------------|---------------------------------------------------------------------|
| Conductor resistance                                        |                                                                     |
| Power lines                                                 | ≤26.7 Ω/km                                                          |
| Signal line                                                 | ≤56 Ω/km                                                            |
| Insulation resistance                                       | ≥500 MΩ*km                                                          |
| Current-carrying capacity per DIN VDE 0298 part 4, table 11 |                                                                     |
| Wall mounting                                               | 13 A                                                                |
| Installed in conduit or cable duct                          | 11.5 A                                                              |
| Installed in cable tray                                     | 13.5 A                                                              |
| <b>Ambient conditions <sup>1)</sup></b>                     |                                                                     |
| Temperature                                                 |                                                                     |
| Moving                                                      | -20°C to +80°C                                                      |
| Static                                                      | -20°C to +90°C                                                      |
| <b>Mechanical properties <sup>1)</sup></b>                  |                                                                     |
| Dimensions                                                  |                                                                     |
| Length                                                      | 15 m                                                                |
| Diameter                                                    | 10.1 mm ±0.3 mm                                                     |
| Bend radius                                                 |                                                                     |
| Single bend                                                 | >32 mm                                                              |
| Moving                                                      | >78 mm                                                              |
| Drag chain data                                             |                                                                     |
| Acceleration                                                | Max. 50 m/s <sup>2</sup> (depends on the length of the travel path) |
| Flex cycles <sup>2)</sup>                                   | ≥5,000,000                                                          |
| Velocity                                                    | Max. 300 m/min                                                      |
| Weight                                                      | 2.67 kg                                                             |

Table 2: 8CM015.12-0 - Technical data

- 1) Values refer to the raw cable being used.  
2) At an ambient temperature from -20°C to +60°C.

## 4 Wiring

### 4.1 Cable construction

| Pos. | Description                     | Note                                                                                                                                                                                                                                                                                                                            |
|------|---------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1    | Motor line                      | 8CMxxx.12-0: 4x 0.75 mm <sup>2</sup> + 2x 2x 0.34 mm <sup>2</sup><br>8CMxxx.12-1: 4x 1.5 mm <sup>2</sup> + 2x 2x 0.75 mm <sup>2</sup><br>8CMxxx.12-3, 8CMxxx.19-3: 4x 4 mm <sup>2</sup> 2x 0.75 mm <sup>2</sup> + 2x 1 mm <sup>2</sup><br>8CMxxx.12-5: 4x 10 mm <sup>2</sup> + 2x 0.75 mm <sup>2</sup> + 2x 1.5 mm <sup>2</sup> |
| 2    | 8-pin female circular connector | Dimensions<br>8CMxxx.12-0: ø 28 x 76 mm<br>8CMxxx.12-1: ø 28 x 76 mm<br>8CMxxx.12-3: ø 28 x 76 mm<br>8CMxxx.19-3: ø 46 x 93 mm<br>8CMxxx.12-5: ø 46 x 93 mm                                                                                                                                                                     |
| 3    | Heat shrink tubing              |                                                                                                                                                                                                                                                                                                                                 |
| 4    | Wire end sleeves                |                                                                                                                                                                                                                                                                                                                                 |

Table 3: Motor cables - Cable construction

4.2 8CMxxx.12-0, 8CMxxx.12-1, 8CMxxx.12-3

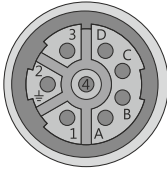
| Circular connector                                                                | Pin | Description | Function                    |
|-----------------------------------------------------------------------------------|-----|-------------|-----------------------------|
|  | 1   | U           | Motor connection U          |
|                                                                                   | 2   | PE          | Protective ground conductor |
|                                                                                   | 3   | W           | Motor connection W          |
|                                                                                   | 4   | V           | Motor connection V          |
|                                                                                   | A   | T+          | Temperature +               |
|                                                                                   | B   | T-          | Temperature -               |
|                                                                                   | C   | B+          | Brake +                     |
|                                                                                   | D   | B-          | Brake -                     |

Table 4: 8CMxxx.12-0, 8CMxxx.12-1, 8CMxxx.12-3 motor cables - Pinout

4.3 8CMxxx.12-0

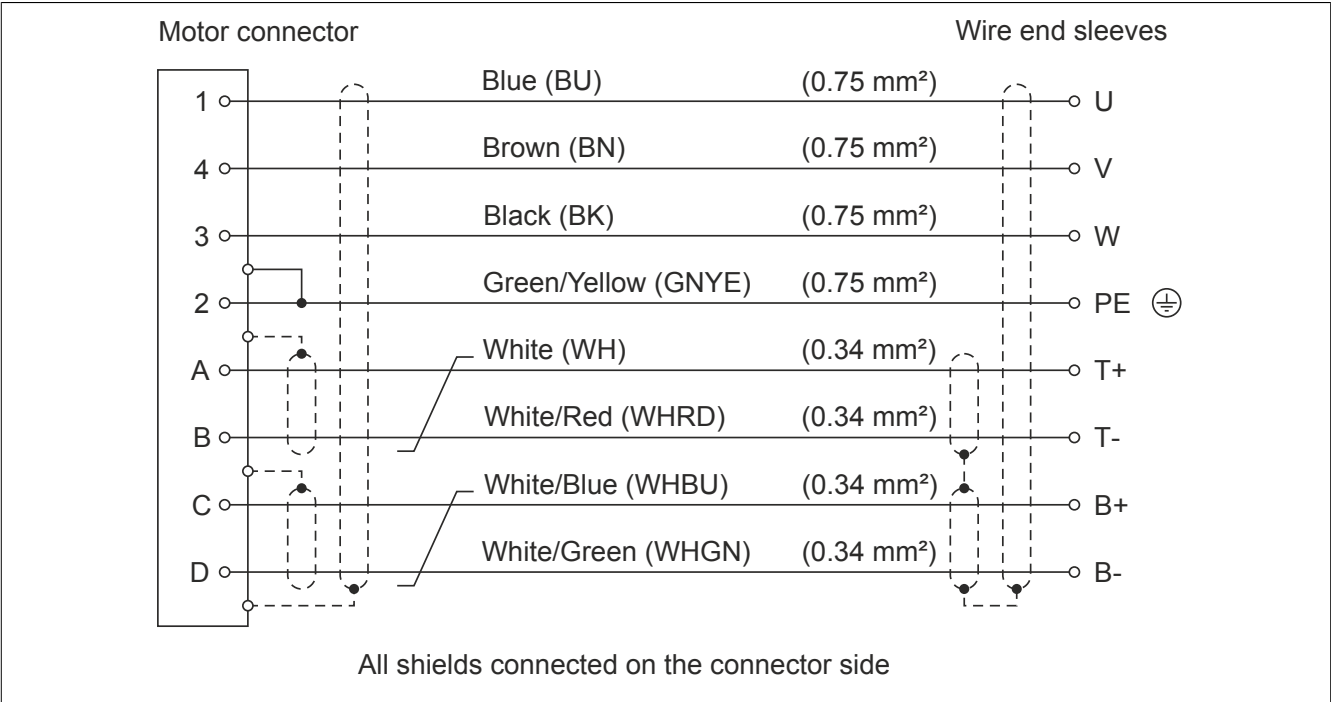


Figure 1: 8CMxxx.12-0 motor cables - Cable diagram